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Notes on Some New Zealand Mollusca in the British Museum

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Abstract

As a result of the examination of molluscan types in the British Museum (Natural History) notes and figures are here given for the types of species of *Pectunculina, Chlamys, Kellia, Tellinella, Myadora, Micrelenchus, Friginatica, Pleurotoma, Paracomitas, Antimelatoma, Aoteadrillia,* and *Asperdaphne.*

THE following notes were made in the Mollusca Section, British Museum (Natural History) during 1960 and the early part of 1961, while the writer held a Nuffield Travelling Fellowship in Natural Sciences. The major work in hand was concerned with Antarctic Mollusca, but the opportunity was taken to examine and photograph the types of some New Zealand mollusca.

Some of these conclusion will be published elsewhere, but these rather miscellaneous notes are here brought together under one head.

Whatever may be said to the contrary on theoretical grounds, practical systematics still requires access to type material or failing this access to adequate figures of types. The types of many of the early discovered New Zealand mollusca are in overseas institutions and many of these types have never been properly figured. Fleming (1951) figured and discussed a number of New Zealand molluscan types in the British Museum, and the present paper is largely supplementary. Under the circumstances no excuse seems necessary for providing additional figures of type material.

Pectunculina lata (Smith, 1885) Pl. 1, fig. 4.

1885. *Limopsis lata* Smith, Challenger Zool. 13, p. 257, Pl. 18, figs. 7, 7c.
1913. *Limopsis lata*: Suter, Man. N.Z. Moll., p. 853, Pl. 51, figs. 9, 9c.
1956. *Pectunculina tasmani* Dell, Rec. Dom. Mus. 3, p. 32, figs. 1–4.

A good series of adult shells from B.S. 201, off Taiaroa Head, Otago, in c. 300 fathoms has been compared with the type series of *lata* Smith. Smith's type series of *lata* is quite variable as regards shell proportions and strength of sculpture, and this variability would encompass all the New Zealand shells seen by the writer including the type series of *tasmani.* There is no doubt, therefore, that *tasmani* should be considered a synonym of *lata.* Much additional experience with species of the genus *Limopsis* has convinced the writer that a great deal of variability must be expected in species of this genus. It seems very probable that

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other species included in *Pectunculina* should not be separated from *Limopsis*, and *Pectunculina aoteana* Vella from the middle Tongoporutuan is very close indeed to *lata*.

Chlamys dieffenbachi (Reeve, 1853). Pl. 1, fig. 3.

1853. *Pecten dieffenbachi* Reeve, Conch. Icon. spec. 88.
1913. *Pecten zelandiae* Suter, Man. N.Z. Moll. p. 878 (in part).
1928. *Chlamys celator* Finlay, Trans. N.Z. Inst. 59, p. 268, Pl. 42, figs. 49, 50.

The types of *dieffenbachi* Reeve are represented by three specimens from the Cuming Collection mounted on a tablet labelled "New Zealand". Two of these specimens are recognisable as those figured by Reeve (Figs. 88a, 88b). The specimen upon which figure 88a was based is here designated lectotype. Reeve indicates that the species was described by Gray in "App. Dieffenbach's New Zealand", but the name does not appear in this latter work. The species must therefore date from Reeve. These specimens prove to belong to that form subsequently described as *celator* by Finlay. This latter name has been in constant use by New Zealand authors since Finlay. Dieffenbach's specimens probably come from the the vicinity of Wellington, and specimens of *celator* (= *dieffenbachi*) are commonly collected near Wellington Heads imbedded in sponges, which is a common habitat for this species. It is unfortunate that rectification of nomenclature has had to wait so long in this particular case, but it is gratifying that Dieffenbach's name will thus be preserved amongst the New Zealand mollusca.

Chlamys zelandiae Gray, 1843, Pl. 1, fig. 2.

The type of *zelandiae* Gray is labelled "New Zealand Dr Stanger". It appears to represent the typical North Island shell, usually identified under this name. The ribs bear definite prickles which are not raised into scales. Suter included the name *Pecten multicostatus* Reeve in the synonymy of *zelandiae* Gray. As noted by Iredale (1915, p. 486) this is not a New Zealand species. On the other hand *Pecten laetus* Gould, judged by the figure (Gould, 1852, fig. 571) is a synonym of *zelandiae*.

Chlamys gemmulata gemmulata (Reeve, 1853). Pl. 1, fig. 1.

1853. *Pecten gemmulatus* Reeve, Conch. Icon. spec. 111.
1951. *Chlamys gemmulata gemmulata* Fleming, Trans. Roy. Soc. N.Z. 79, p. 132, Pl. 19, figs. 4, 5.

Although the original type specimens are mounted on a tablet labelled "Moreton Bay" both Iredale (1939, p. 354) and Fleming (1951, p. 132) have shown that the specimens represent the typical central New Zealand shell. As Fleming has noted, the subspecific differentiation from the southern *radiata* Hulton is a weak one. *C. gemmulata gemmulata* ranges at least from off Oamaru to the Hauraki Gulf.

Suter (1913, p. 878) used the name *gemmulatus* as a subspecies of *zelandiae*. Fleming (1951, p. 133) designated the smallest of three shells on a tablet in the British Museum as lectotype (a specimen which matched Reeve's figure). One of the larger specimens is here figured to show the more usual colour pattern.

Chlamys consociata Smith, 1915. Pl. 1, figs. 5, 6, 7, 8.

1915. *Chlamys consociata* Smith, *Brit. Ant. "Terra Nova" Exped., Zool.* 2, p. 89, Pl. 2, figs. 3, 8.
1927. *Chlamys consociata* Finlay, *Trans. N.Z. Inst.* 57, p. 452.
1951. *Chlamys gemmulata consociata* Fleming, *Trans. Roy. Soc. N.Z.* 79, p. 133.

This distinct form has been either completely ignored in New Zealand or

wrongly identified. It was described just after the publication of Suter's Manual of New Zealand Mollusca, and apart from list mention was not discussed until Fleming (1951) commented on the form after examination of the type. Fleming associated it with *gemmulata* as a regional subspecies. The original figure is thoroughly adequate but is apparently not readily available. The name has therefore come into use for the form of *gemmulata* common in the Hauraki Gulf—a form with which the type of *consociata* shows little relationship (Powell, 1950, p. 75). Part of the muddle stems from the fact that Fleming could not refigure the type.

The writer can now record that specimens which agree very well with the type have been collected by the New Zealand Oceanographic Institute at Station B.93, north of Three Kings Islands, in 30–50 fathoms, and in several other dredgings in this area. To assist in identification of the species figures of the type are here presented.

The species appears to be confined to the waters of the extreme north of New Zealand. The type has much more prickly ribs than any of the *gemmulata* series and to the writer it does not seem to be allied closely to this series. The main ribs break into two, but one is always subsidiary to the main rib, and this subsidiary rib does not bear prickles.

Genus KELLIA Turton, 1822

TYPE SPECIES (subsequent designation Recluz, 1844) *Kellia suborbicularis* Montagu; (subsequent designation Herrmannsen, 1847) *Cardium rubrum* Montagu.

SYNONYMS: *Chironia* Deshayes 1839, type species (Monotypy) *Chironia laperousii* Deshayes. *Marikellia* Iredale 1936, type species (original designation) *Kellia solida* Angas.

The original spelling was "*Kellia*" even though Turton named the genus after "J. M. O'Kelly Esq.". Turton obviously believed this to be the correct Latinised version of his friend's name, and it does not appear to be a case for automatic emendation. Many subsequent writers have used the form "*Kellya*", but this is not a correct version of the original patronym.

Kellia cycladiformis (Deshayes, 1834). Pl. 2, figs. 5, 6.

1834. *Erycina cycladiformis* Deshayes, Traité Elémentaire de Conchyliologie, p. 736, Pl. 11, figs. 6, 7, 8, 9.
1856. *Erycina cycladiformis* Deshayes, Proc. Zool. Soc. London, 1855, p. 181.
1880. *Kellia cycladiformis* Hutton, Man. N.Z. Moll., p. 157.

Suter (1913, p. 923) listed the New Zealand species as *Kellia suborbicularis* Montagu with *Erycina cycladiformis* Deshayes and *Erycina rotunda* Deshayes as synonyms. Neither Iredale (1915) nor Finlay (1927) in their respective commentaries mentioned *cycladiformis*. Iredale (1936, p. 274) proposed *Marikellia* with *Kellia solida* Angas as type. Iredale, following Grant and Gale, believed the type of *Kellia* to be *Cardium rubrum* Montagu, and therefore that *Kellia* should replace *Lasaea*. He did not use *Chironia* Deshayes because he believed this to be preoccupied by *Chironius* Fitzinger and *Chirona* Lyell.

Powell, in successive checklists, used *Kellya suborbicularis* (1937, p. 58) and *Marikellia rotunda* (1946, p. 59; 1957, p. 80). Cotton and Godfrey (1938, p. 213) used *Kellia* for the *Lasaea* series, but (p. 215) supplied a generic diagnosis for *Marikellia*. Laseron (1956, p. 7) reiterated Iredale's argument and used *Marikellia* for five species from New South Wales, including *rotunda* Deshayes and *solida* Angas. Turton, in his original description of *Kellia* included the two species, *suborbicularis* and *rubra*.

If the designation by Recluz of *Kellia suborbicularis* as the type species of *Kellia* is accepted, this predates Herrmannsen's designation of *Cardium rubrum* as the type, and both *Lasaea* and *Kellia* may be retained. If *Lasaea* is accepted on this argument, there are no grounds for retaining *Marikellia* as distinct from *Kellia.*

It seems very possible that *Kellia suborbicularis* is a widely distributed form, as is also *Lasaea rubra* and some species of *Hiatella.* Many "species" of *Kellia* have been described from many parts of the world and in most areas where it occurs, species of the genus appear very variable, the same variants in shell outline cropping up in widely different regions. Anatomical investigation will be needed to prove identity, but close study of some of these widely distributed forms is urgently required. In any case the New Zealand species is so close in all shell characters to *Kellia suborbicularis* that the two forms cannot but be considered congeneric (if they are not conspecific). This is true regardless of the fate of *Marikellia* (based upon the Australian *Kellia solida* Angas) although it seems certain that *Marikellia* must become a synonym of *Kellia.*

The specific name to be used in the meantime for the New Zealand form should be *cycladiformis.* Deshayes described *cycladiformis* in 1834 as "Habite la Nouvelle Zélande", but in 1855 credited it from "le nord de la Nouvelle Hollande (Jukes); la Nouvelle Zélande (Quoy)." The species was thus described originally from New Zealand. The type is still present in the collections of the British Museum (Natural History) and proves to be identical with New Zealand shells. It is a large specimen (12mm x 9mm) and is figured herein, together with the type of *rotunda* Deshayes. The whole question of the true geographical provenance of *cycladiformis* has been clouded by the use of the name by some workers for a species from southern South America. Thus Melvill and Standen (1907, 1914) and Carcelles (1953) have recorded *cycladiformis* from the South Orkneys, Burdwood Bank, Tierra del Fuego and Magellan Strait. Soot-Ryen (1959, p. 50) considered it to be conspecific with *Kellia bullata* without apparently recognising its original locality.

The name *cycladiformis* is thus by far the earliest name available in the genus apart from *suborbicularis,* was definitely proposed for a New Zealand shell, and the type matches local specimens. The subsequent confusion surrounding this name does not alter the above position, and the name *cycladiformis* should therefore be used for the New Zealand form, at least until the relationships with *suborbicularis* can be critically studied.

Tellinella charlottae (Smith). Pl. 2, figs. 1, 2.

1885. *Tellina* (*Tellinella*) *charlottae* Smith, Challenger Rep. 13, p. 100.
1951. *Tellinella charlottae*: Fleming, *Trans. Roy. Soc. N.Z.,* 79, p. 134.

Figures of both valves of the type of *Tellinella charlottae* are given here.

Myadora subrostrata Smith, 1880

1880. *Myadora subrostrata* Smith, Proc. Zool. Soc., London, 1880, p. 584, Pl. 53, figs. 6, 6a, 6b, 6c.
1913. *Myadora subrostrata* Suter, Man, N.Z. Moll. p. 1032, Pl. 55, figs. 16, 16a.

Smith did not designate a type in his original description, and two separate specimens were figured. The type tablet in the British Museum bears five double valves and a single valve. One specimen figured by Smith, the original of figs. 6, 6a, is a distorted shell. The other specimen figured by Smith (Fig. 6b, 6c) is normal and matches Smith's measurements and is therefore selected as lectotype.

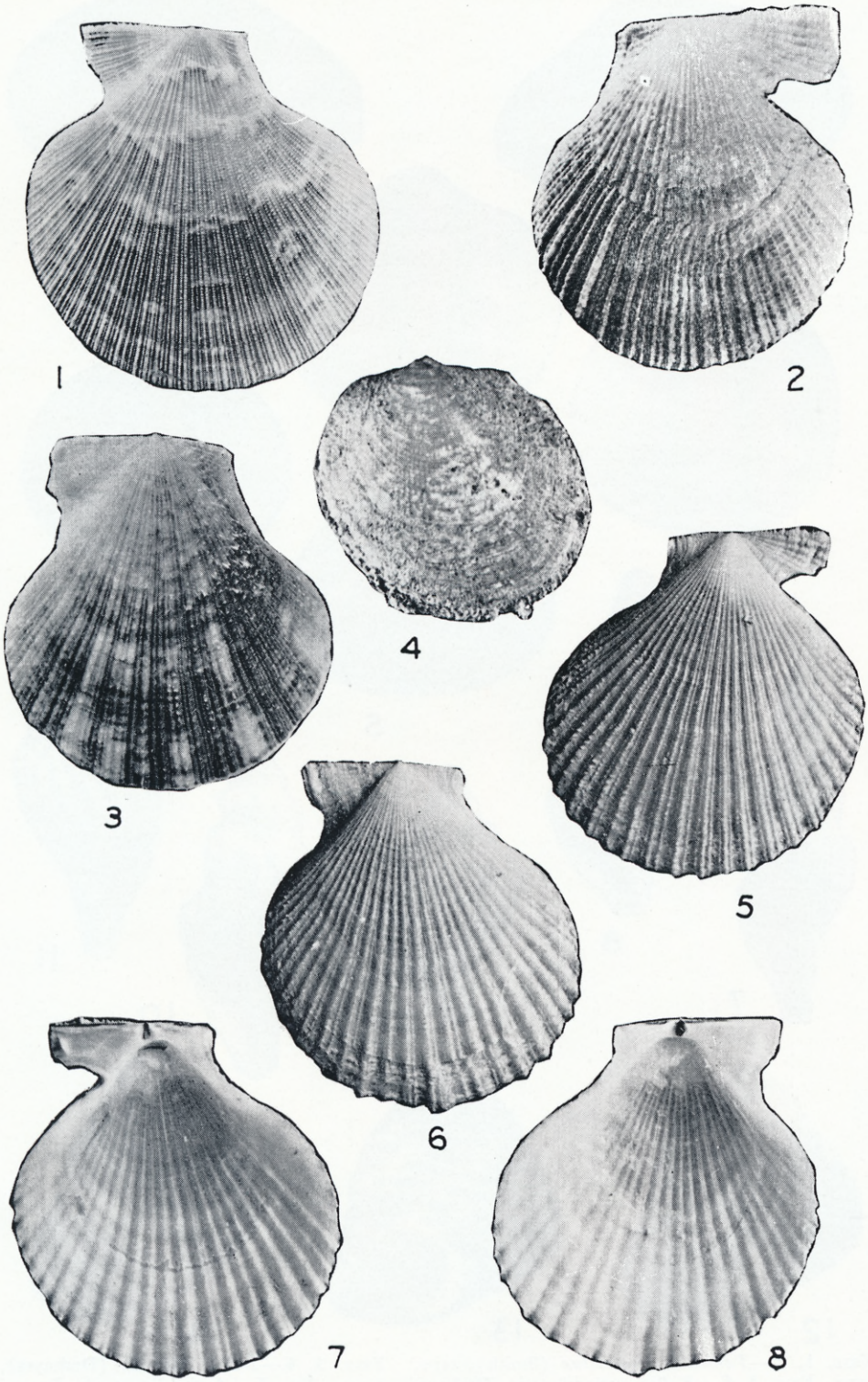
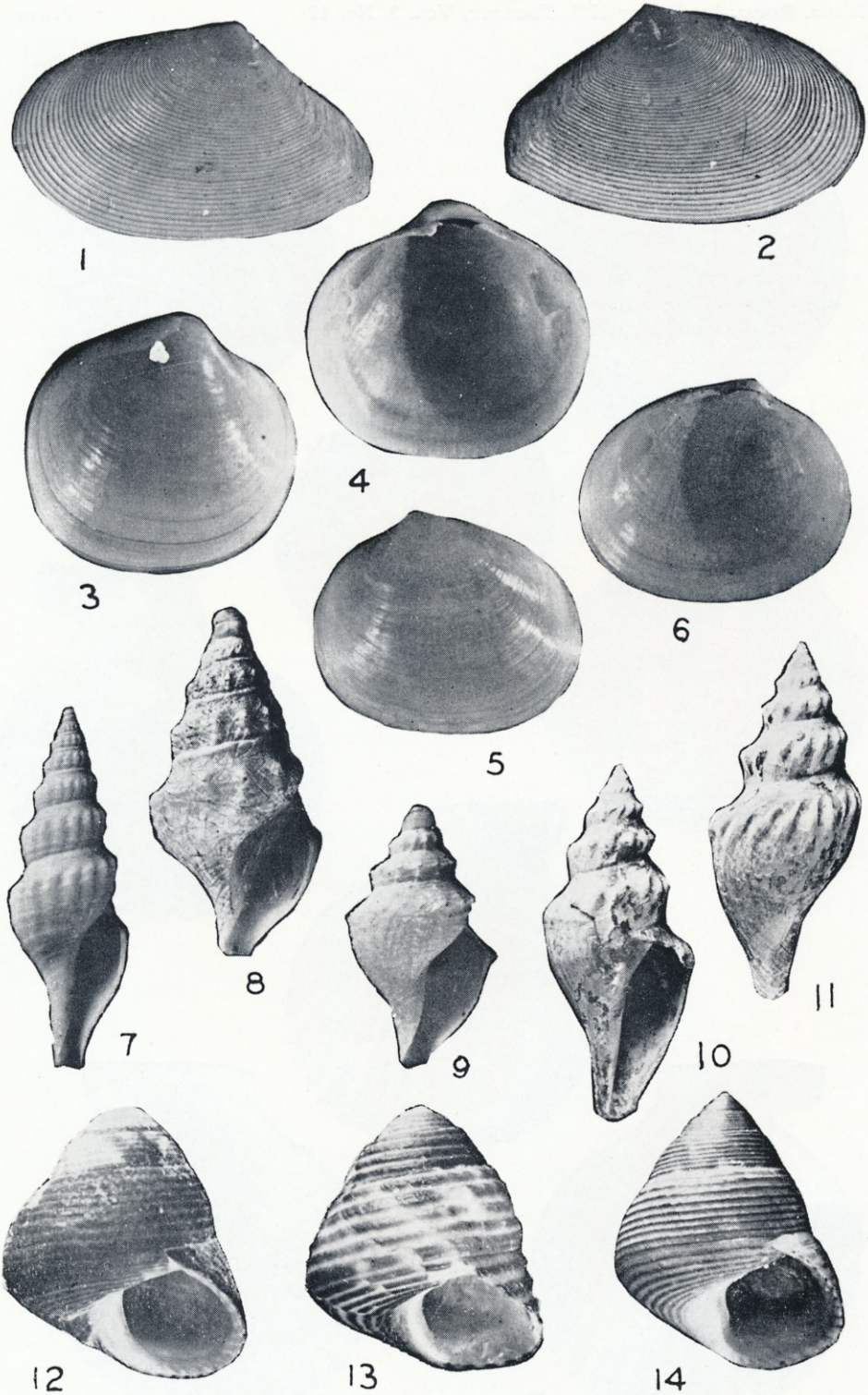


FIG. 1.—*Chlamys gemmulata gemmulata* (Reeve), syntype. FIG. 2.—*Chlamys zelandiae* Gray, type. FIG. 3.—*Chlamys dieffenbachi* (Reeve), type. FIG. 4.—*Pectunculina lata* (Smith), type. FIGS. 5, 6, 7, 8.—*Chlamys consociata* Smith, type.



FIGS. 1, 2.—*Tellinella charlottae* (Smith), type. FIGS. 3, 4.—*Kellia rotunda* (Deshayes), type. FIGS. 5, 6.—*Kellia cycladiformis* (Deshayes), type. FIG. 7.—*Antimelatoma buchanani maorum* (Smith), type. FIG. 8.—*Aoteadrillia bulbacea* (Watson), type. FIG. 9.—*Asperdaphne ula* (Watson), type. FIGS. 10, 11.—*Paracomitas gypsata* (Watson), type. FIG. 12.—*Micrelenchus huttoni* Smith, type. FIG. 13.—*Micrelenchus tenebrosus* (Adams), type. FIG. 14.—*Micrelenchus rufozonus* (Adams), type.

Genus MICRELENCHUS Finlay, 1927

1927. *Trans. N.Z. Inst.*, 57, p. 355.

The forms of this genus have caused difficulty in New Zealand in the past. They are medium sized gastropods, common intertidally, living on rocks and algae, with some of the species extending into deep water. Variations in colour pattern and sculpture are common and the group as a whole needs a modern revision based upon the fuller geographical and benthic collections now available. There has been great confusion as to the relationships of *huttoni* Smith and *tenebrosus* Adams, the types of both species being preserved in the British Museum. The types of *tenebrosus* Adams have never been figured and they prove to belong to a particularly anomalous form with very coarse sculpture. They are unlike any other specimens the writer knows from New Zealand. Other specimens have the same number of spirals but they are never so strong. In addition there is no trace of an umbilicus. At the same time opportunity is taken to figure the type of *M. rufozona* (Adams) (Fig. 14).

MEASUREMENTS

	Ht.	Diam.	Spirals Body Whorl	Spirals on Penultimate
M. huttoni Smith, types	14.2	12.0	19	8
M. huttoni Smith, types	13.7	12.0	17	8
M. huttoni Smith, types	8.8	7.5	18	8
M. tenebrosus Adams, types	10.2	8.5	12	5
M. tenebrosus Adams, types	9.8	8.4	14	6

Friginatica amphiala (Watson, 1881)

1881. *Natica amphiala* Watson, Journ. Linn. Soc. 15, p. 260.
1886. *Natica amphiala* Watson, "Challenger" Zool. 15, p. 437, Pl. 27, fig. 6.
1913. *Polinices amphialus* Suter Man. N.Z. Moll., p. 290 (in part).
1953. *Friginatica conjuncta* Dell, Rec. Dom. Mus. 2, p. 43, fig. 8.
1956. *Friginatica conjuncta* Dell, Dom. Mus. Bull. 18, p. 73.
1956. *Uberella amphiala* Dell, Dom. Mus. Bull., 18, p. 76.

It is pleasing to the writer to be able finally to lay the ghost of *Natica amphiala* Watson, which has haunted students of New Zealand mollusca since its original description. Until Marwick (1924, p. 570) showed distinct differences between Watson's description and figure, and specimens of *vitreus* Hutton the two species were confused and the name *amphiala* was used for many recent and fossil specimens. Since Marwick's discussion the difficulty has been to identify Watson's species with any known form. This difficulty increased as more deep water members of the family Naticidae were obtained from New Zealand. The writer (Dell, 1956, p. 76) discussed the species in relation to all the deep water members of the family, quite unaware that he had discussed this same species under the name *Friginatica conjuncta* some three pages earlier and that he had himself redescribed the species (Dell, 1953, p. 43). Watson's figures of *Natica amphiala* would never have indicated this fact, but a careful examination of the types shows that they are in fact *conjuncta*. The channelled suture is present in the "Challenger" specimens, but is considerably eroded. It is this basic channelling plus the subsequent erosion that has given the shell, the "flattened, globose" form of Watson's description. The prominent, pointed base mentioned by Watson is also applicable to the species.

Pleurotoma (Thesbia) xanthias Watson, 1886.

1886. *Pleurotoma* (*Thesbia*) *xanthias* Watson, "Challenger" Zool. 15, p. 333, Pl. 26, fig. 9.
1942. *Xanthodaphne xanthias* Powell, Bull. Auck. Inst. Mus. 2, p. 166.

The species has not been collected since the "Challenger" took the unique type in 1,100 fathoms off Cape Turnagain. Powell, on the basis of Watson's description of the species and of *membranacea* Watson erected a new genus *Xanthodaphne* with *membranacea* as the type species. The type of *xanthias* is an extremely battered, decorticated, immature specimen, largely covered by the base of a leathery Actinarian. There is only a relatively small area of the shell which shows the original shell surface. The protoconch is badly broken and worn but looks as if it may have been Daphnelloid. Watson's figure is obviously considerably stylised. It is extremely doubtful if the type could ever be matched satisfactorily with better preserved material. The specimen should never have been described and the species might well be considered as *nomen dubium*.

Paracomitas gypsata (Watson). Pl. 2, figs. 10. 11.

1881. *Pleurotoma* (*Drillia*) Watson, Journ. Linn. Soc., 15, p. 413.
1886. *Pleurotoma* (*Surcula*) *gypsata*, Watson, "Challenger" Zool. 15, p. 297, Pl. 25, fig. 1.
1913. *Surcula gypsata*: Suter, Manual N.Z. Moll., p. 486.
1942. *Paracomitas gypsata*: Powell, Bull. Auck. Inst. Mus., 2, p. 62.

Watson's figure of this species does not show the true form of the axial sculpture and the frontal face is not shown at all. Photographs of the type are here presented. The species has not as yet been recollected.

Antimelatoma buchanani maorum (Smith). Pl. 2, fig. 7.

1877. *Drillia ? maorum* Smith, Ann. Mag. Nat. Hist. (4) 19, p. 497.
1913. *Drillia buchanani maorum* Suter, Manual N.Z. Moll., p. 474, Pl. 46, fig. 22.
1942. *Antimelatoma buchanani maorum* Powell, Bull. Auck. Inst. Mus., 2, p. 97.

The type of this species has never before been figured, in fact any figures of the species itself are rare, and Suter's figure shows practically no detail.

Aoteadrillia bulbacea (Watson). Pl. 2, fig. 8.

1881. *Pleurotoma* (*Drillia*) *bulbacea*, Watson, Journ. Linn. Soc., 15, p. 418.
1886. *Pleurotoma* (*Spirotropis*) *bulbacea*, Watson, "Challenger" Zool. 15, p. 325, Pl. 25, fig. 9.
1913. *Spirotropis bulbacea*: Suter Manual N.Z. Moll., p. 483.
1942. *Aoteadrillia bulbacea*: Powell, Bull. Auck. Inst. Mus. 2, p. 89.

This is another of the "Challenger" species which has not yet been recollected. Powell's allocation in *Aoteadrillia* seems the correct generic placing.

Asperdaphne ula (Watson). Pl. 2, fig. 9.

1881. *Pleurotoma* (*Drillia*) *ula* Watson, Journ. Linn. Soc. 15, p. 420.
1886. *Pleurotoma* (*Bela*) *ula* Watson, "Challenger" Zool., 15, p. 321, Pl. 22, fig. 1.
1942. *Asperdaphne ula*: Powell, Bull. Auck. Inst. Mus. 2, p. 162.
1956. *Asperdaphne ula*: Dell, Dom. Mus. Bull. 18, p. 136, fig. 207.

Dell, in identifying a specimen from deep water off Otago, commented that his specimen agreed with Watson's description and figure except that the axials on the body whorl were less marked than his figure showed. Examination of the type shows that Watson's figure does over-emphasize the axials on the body whorl. A photograph of the type is reproduced here.

Acknowledgments

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